Sandstone and Tile

Annual Feature Edition of the Stanford Historical Society Newsletter **Volume 3, No. 2 / Winter 1979**

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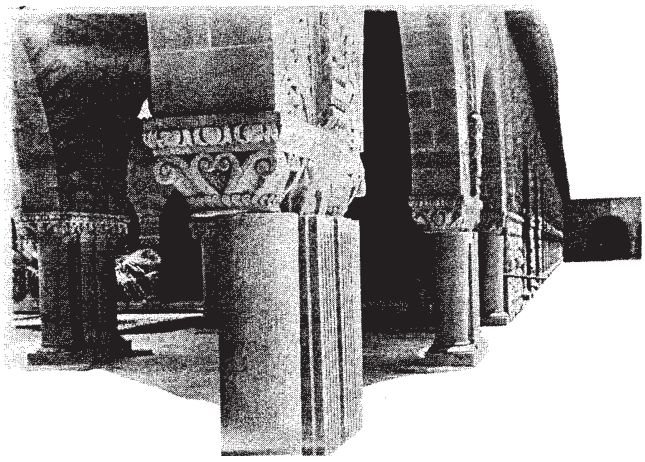
(All pictures relating to the article, "A Young University Is Tested," including the front and back covers, are from the Stanford University Archives.)



The powerful hand of the '06 earthquake shoved out of line the columns of the arches connecting Memorial Court to the Inner Quad.

The Chi Psi house appears to have been only slightly damaged, but actually it was pitched off of its six-foot foundations. Student humor prevailed.

A Young University Is Tested

After the earth stopped shaking that April morning in '06 and the terror subsided, there was work to be done

by Roxanne Nilan

As I reached the head of the stairs the house fell about six feet from its foundations to the ground and I was thrown to the floor. Other fellows went dashing by and I blindly followed. Once down stairs we found all the doors jammed, so one of the boys smashed a plate glass window with his fist and we all jumped out . . . . Even now the earth shook as though convulsed with a spasm and no one knew what would happen next.[1]

—Ernest N. Smith, undergraduate resident of the Chi Psi house

We can still hold our daily organ recital within an exquisite ruin. And still we are very young.[2]

—David Starr Jordan

Many people think of Stanford's experience in the great earthquake of Wednesday, April 18, 1906 in terms of buildings damaged or destroyed. They are familiar with the photographs of damage to the steeple and facade of Memorial Church, to the new library and gym alongside the Oval, and to the massive Memorial Arch at the front of the Quad. Or they remember the statue of Louis Agassiz plunged headfirst into the concrete walk in front of Jordan Hall.

But what of the rest of the story—the human story of the earthquake and its aftermath? This is to be found in the many letters and reminiscences written by Stanford students, faculty, and staff; in the emergency issues of the newspapers; and in official reports. These writings do far more than enumerate damaged buildings; they reveal the efforts to bring life back to normal after an incredible event, efforts to give relief to the less fortunate, efforts to take stock of the physical damage and begin once more on a period of construction.

In the morning light, the Stanford community poured into the streets to survey the damage beyond their own living quarters. "By dozens, they crowded out to peer into the whirling cloud of dust which concealed the Quadrangle," wrote Edith R. Mirrielees, a senior English major (and later professor of English at Stanford), for the special earthquake edition of the *Stanford Alumnus*, May 1906. "From the engineering block, masses of steam rose volcano wise; from the fallen church and arch quantities of fine, bluish dust mingled with steam, giving to the whole an appalling appearance of present danger, but hiding, for a moment, the extent of the injury. As the dust settled, ruin after ruin stood out in sharp relief against the blue of the early morning sky,—the ragged outline of Memorial Arch, the pile of broken stone which had been a chimney, farther off, the gaping front of the Chemistry building, and the big library dome towering up unsupported. The watchers in the street stood staring like people fascinated."[3]

Crowds wandered in silence from place to place in what seemed a prearranged pattern—from Encina Hall to the Quad, from the Quad to Roble Hall, to the Stanford residence, to the Mausoleum, back up past the Museum, and over to the library and gym.

It was not long before the curious and the souvenir seekers were perched on crumbling walls and under tottering arches. One was found attempting to chip the head of Christ from the rose window which had fallen—almost uninjured—from the front of Memorial Church. Another was seen carrying away the previously unbroken finger of the statue, the Angel of Grief.

That first day seemed endless. With no mail, no

Roxanne Nilan is Assistant University Archivist in the Stanford University Archives, located in Cecil H. Green Library.

newspapers, no telegraph, and most trains cancelled, Stanford was adrift. President Jordan gave "a stirring talk" in front of Encina in an attempt to bolster spirits. "It is not buildings that make a university," he commented, "but professors and students, and I ask the student to demonstrate this." The crowd cheered him and sang "Hail, Stanford, Hail."[4]

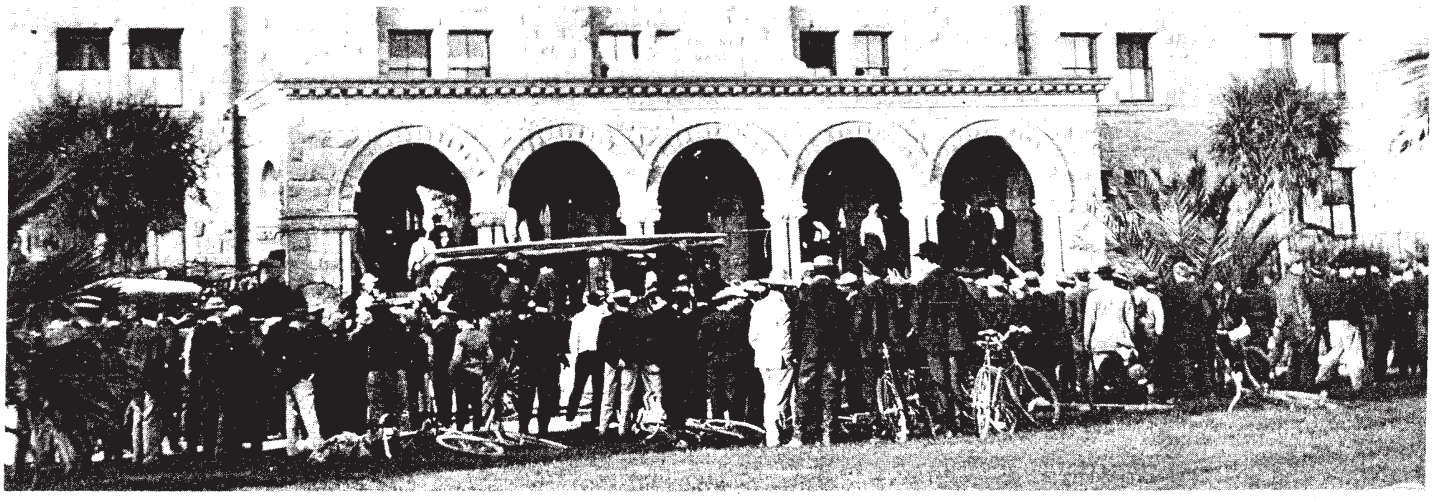
As the day progressed and curiosity about the surrounding damages was satisfied, most people simply stood and waited. To a crowd in front of the inoperable Telegraph Office near the Quad, President Jordan announced with a megaphone that Lick Observatory had warned of an aftershock. He suggested that everyone keep away from buildings, perhaps even consider going up into the hills. Many immediately ran for their rooms, gathered up some valuables—clothes, letters, photographs. Many went up into the foothills that afternoon and, again, waited. The view of the Santa Clara Valley was peaceful, though a yellow haze hung in the motionless air. As the hours passed and no strong shock presented itself, they lost their fear and, with boredom setting in, returned to the campus. A second shock finally came in the late afternoon. Though comparatively slight, it caused the shaky and unnerved to drop everything and run to the middle of the nearest street.

Rumors had begun as soon as the dust of the first shock settled. Chicago was in ruins! Manhattan was under water! Santa Barbara and Los Angeles were destroyed by a tidal wave! Refugees on the few trains coming down from San Francisco reported that fires had started in a dozen places and that the city was doomed. "During the day and night," wrote Edgar Smith, a junior in Civil Engineering, "someone would come along every few minutes with a wild rumor; the Call Building is lying flat across Market Street; the insane at St. Agnews Asylum were loose and running wild; a band of thugs out of San Francisco were coming down the Peninsula, murdering and robbing as they went; the earth had opened up and swallowed rows of buildings; somebody just got word from Mt. Hamilton Observatory to warn people to get out of all buildings because there was going to be another shake in 30 minutes, or 10 o'clock, or some other time."[5]

To protect both people and structures, students organized themselves into a watch for the first night. Edgar Smith wrote: "During the afternoon I met a fellow Encina Hall student, Roy Collom, who asked me if I would help him enlist students for a night guard, which I did. As I remember, we got enough students to man ten posts on two hour shifts around the Quadrangle. The next day the University authorities were able to take over and the student guards were released."[6]

For many, the first night was like a nightmare. Ernest N. Smith wrote: "As night fell the terror of the people commenced, especially the girls on campus. We had heard nothing definite from the outside world and it was impossible to get any word out and nothing but wild rumors came in. As night fell huge bonfires were built in front of different fraternity and sorority houses and all gathered around and tried to sing and jolly up, but it was hard work. Way off in the distance on the horizon, we could plainly see the dull glare of the burning city and at short intervals came the dull boom of a loud explosion. And we were thirty miles away. Late in the evening a few fellows returned from the City, those who had hurried up early in the morning. They came into the groups by the fires and told how the city was being consumed, how martial law had been declared and how people were being shot right and left for disobeying the soldiers, how ghouls and thieves were robbing the dead and breaking into houses . . . Many of those around the fires had relatives in the City and you can imagine what terror such talks caused to many."[7]

Cots, blankets, pillows, even tents, were spread on the lawns for the night. The women at Roble had their beds out on the front lawn near a great bonfire, and in plain sight sat one of the University's athletic heros (whose name is, unfortunately, unrecorded) with a revolver across his knee. Whether or not he could protect the women from the bands of thugs



and lunatics expected was less important than the reassurance provided by his presence.

As the eerie sound of dynamiting boomed in the misting night air, another rumor started: the second, heavy shock would come 24 hours after the first one—at 5:13 a.m. The volunteer guards patrolled and, in an effort to keep up spirits, shouted out the hours: "2 o'clock and all is well." But to some, including Jeannette Hayward, a senior in Drawing, "we seemed to be awaiting our death sentence. To us, that night, five thirteen would mean the end of all . . . . Five o'clock came with its 'All is well, all is well.' Only thirteen minutes left! Imagine the tension!" Gradually, it was half past five, then six o'clock as the sky grew lighter and lighter. "I do not know just why it was," Hayward wrote, "but after that we never thought of another earthquake."[8]

Thursday, the second day, was spent salvaging belongings, packing, clearing debris. Word came that the rest of the country was safe after all, even Los Angeles and Santa Barbara. Three members of the staff of the student newspaper, the *Daily Palo Alto,* put out single page editions for the next three days in order to keep the campus informed. Hearing that two young professors, math professor Rufus L. Green and electrical engineering professor Harris J. Ryan, intended to find an operating telegraph office, 200 people lined up in front of Green's house at 13 Salvatierra to send messages to family and friends. They cheered as the automobile pulled away. The professors, weighted down with messages, finally found their telegraph office—in Sacramento.

The relief was evident. While an important consideration was to reassure worried parents, of even greater importance was the fact that many were stranded with little or no money. Banks would not cash checks or postal orders—transactions everywhere were on a cash only basis. How could students get home? How could they buy food if they needed it? As a result, many of the telegrams were simple: "Am safe. Send fifty."

With the immediate danger past, the Stanford community began to look outward and to the future. Students began thinking once again of schoolwork. What about classes? What about finals? Would the seniors be able to graduate as planned? President Jordan, who had at first predicted with characteristic optimism that classes would reconvene on Friday, had reconsidered and answered these many questions in a circular issued Thursday, April 19: "All class work in Stanford University shall be suspended for the rest of the college year, and each professor and instructor shall report the credits earned by members of his classes as though the year's work were completed. . . . Each professor will indicate at once when and where he will meet his students for consultation or examination. Students entitled to degrees on the basis of the reports received will be granted their diplomas in due season. The next term will open on August 23rd, as indicated in the Register."[9]

Announcements began to appear immediately in the campus newspaper, such as: "Students in English 6, sections 1 and 2, and in English 8, sections 3 and 4, may consult me in front of the University [Stanford] Inn, 9 to 11, Friday, April 20th. H. J. Hall," and "Students who have library books please return them to 11 Alvarado Row. M. G. Dodge."[10]

Professor John Casper Branner, head of the Geology Department—ever on the alert for fascinating geological study—began plans for a study of the earthquake fault line. During the coming summer, a geology class would survey 198 miles of the San Andreas fault.

With academic business settled for the school year, many students left for home or for summer jobs, but not every one. Its own problems relatively under control, the Stanford community turned its eyes toward San Francisco. A mass meeting had been held on one of the campus lawns. Volunteers were called for to help with the homeless, the sick and wounded of San Francisco. Many—students, faculty, and staff—responded, and in the excitement forgot their own troubles.

Several students, including Ernest Smith, were

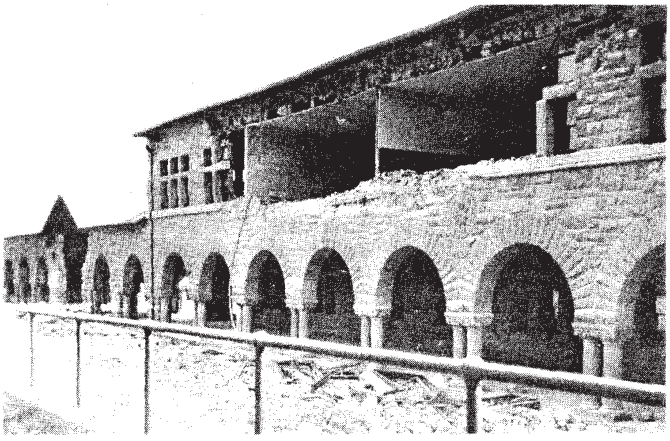
These pictures were taken by Carl Breer, '09, a few hours after the early-morning quake. **At left,** *Encina students watch as five residents of the dormitory who were injured by a falling chimney are loaded into an improvised horse-drawn ambulance. One student was killed.* **At right,** *the broken stalk of the 100-foot-tall chimney of the power house is a monument to the night fireman who lies crushed beneath its rubble. He, according to a witness, raced into the building just as the quake struck and pulled the main electrical switch, preventing the possibility of electrical fires in campus buildings.*

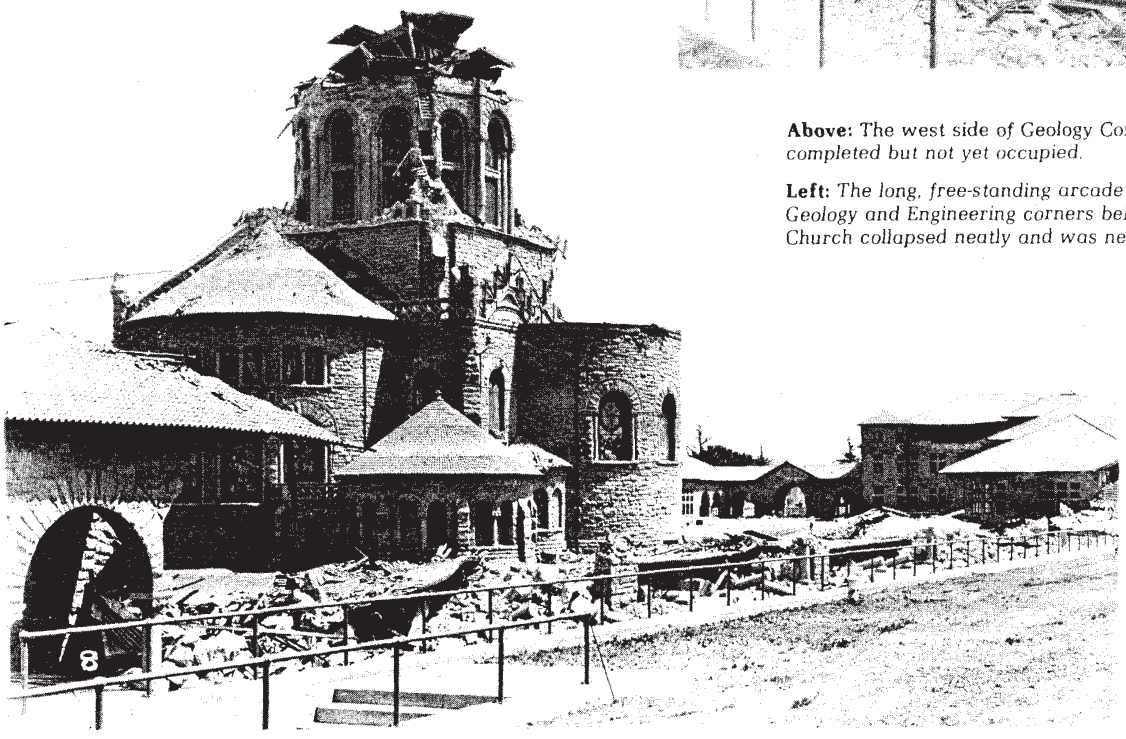
sworn in by the Deputy U.S. Marshals and sent to guard a railroad bridge. "There were wild tales afloat that bands of looters from the city were making their way southward fighting and seeking pillage wherever they could. We were told to stop and search everyone coming along the track, take all weapons away and render assistance when we met homeless people. We didn't meet any of the cutthroats and thieves prophesied and didn't have nearly as much trouble as we anticipated."[11]

Another student, "having nothing to do," volunteered at the Red Cross in Palo Alto. He soon had plenty to occupy his time. On the first day, he went from house to house asking for white rags and assorted clothing. That night he was sent up to San Francisco with a load of clothing on the one train operating into the city. "We arrived at the 25th and Guererra Street Station in the rain and pitch dark about ten o'clock and a group of Stanford students unloaded the freight and put it in an Italian's store which had been taken over as a Stanford students relief headquarters. . . . We had to work in the dark to unload the freight because there was no electricity and open flame lights were prohibited. I managed to curl around some boxes or barrels and got enough room to lie down and sleep, and what an eyeful I got when daylight came."[12]

Armed with their "Student Relief" passes, Stanford students were able to explore various parts of the city. Some ended up helping at relief stations other than their own. They spent much of their time, in between explorations, distributing food and clothing. "Carloads of food began to arrive shortly and the railroads spotted them the best they could in different parts of the city. One neighborhood got a carload of oranges, another a carload of canned meats, etc. One district near us got a carload of Arbuckle's coffee, unground, in pound packages. Someone discovered we had a coffee grinder at the relief station, the Italian store. It was a large two wheel hand operated affair and our boys were kept busy grinding coffee for several days."[13]

Evidently, the Stanford relief crew also needed relief. The Reverend D. Charles Gardner, chaplain of Stanford Memorial Church, was appalled to find the students at one station subsisting on a sack of dirty dried prunes—when they had time to eat at all. Returning to Stanford, Rev. Gardner gathered his own cooking utensils and stove and brought them back to the relief station. With his stove, tables, and benches





Above: The west side of Geology Corner, just completed but not yet occupied.

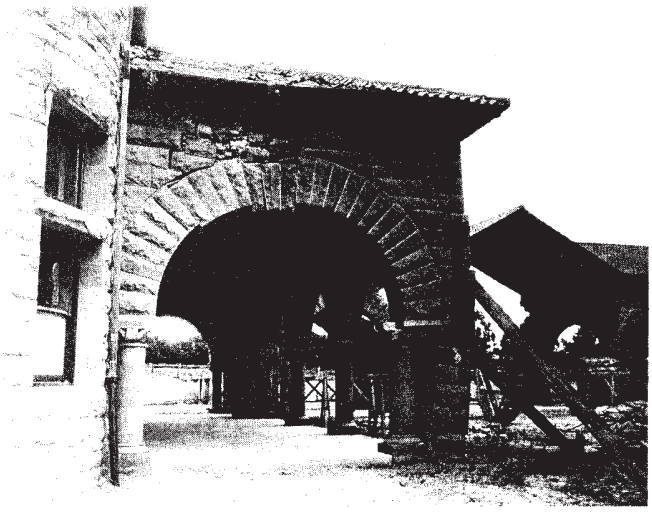
Left: The long, free-standing arcade connecting Geology and Engineering corners behind Memorial Church collapsed neatly and was never replaced.

set up on the curb side, the genteel pastor cooked as long as there were Stanford students remaining at the station.

In about two weeks most of the students who did not have family or friends in San Francisco headed for home or for summer jobs. Some returned to the campus to earn money by picking up rubble or guarding buildings.

The story was not over yet, however. The University now faced the frustrating job of rebuilding. Much, indeed, had been lost in the earthquake, but not as much as many believed. Photographs circulated widely in newspapers across the country had implied that there was little left of the campus to save. The Stanford community, therefore, took to the news media to tell the true situation. President Jordan, Professor Branner, and other faculty members wrote articles for local and national magazines.

The bulk of these communiques was aimed not at the general public, however, but at alumni and friends who might give financial aid. A special edition of the *Stanford Alumnus*, the official magazine of the Stanford Alumni Association, was issued in May 1906, with articles, photographs, editorials, and statements by Jordan and other officials. The issue sought to tell of damages and experiences without sensationalism; the tone throughout was one of thankfulness that the University escaped as well as it did and one of hope for a bright future. The first editorial stated the case bluntly: "For the most part time will undo the damage of the earthquake. Stanford's income is not impaired and nearly everything destroyed can be replaced. Let alumni throughout the country help correct the mistaken impression that Stanford is in ruins. Let them take up some part of the burden of restoration. With their help the development of Stanford will not be retarded long by the great catastrophe."[14]



Damage to the arcade at the back of History Corner.

An official statement, issued by President Jordan and Samuel F. Leib, President of the Board of Trustees, was sent to students, alumni, and friends of the University early in the summer. It assured them that "the buildings of the inner quadrangle were scarcely injured by the disaster of April 18th. The work of restoration of the outer quadrangle is being pushed as rapidly as possible, and we feel certain that the buildings necessary for the actual work of the University, such as classrooms, libraries, laboratories and dormitories, will be ready for use by August 23rd, the date of the entrance examinations for the new term."[15]

The concern for Stanford's public image was obfuscated temporarily by an attempt by the *San Francisco Examiner* to capitalize on the doubts of some regarding the quality of construction of University buildings. In a May, 1906, article whose headline read "Stanford University buildings only shells . . . Suspicion that Stanford structures were not of solid stone!," the *Examiner* gave voice to rumors "current in Palo Alto" that specifications were ignored in order to erect pretentious but in reality cheap, poorly built structures. The article also implied that, while

David Starr Jordan (center) toured the shattered areas of the campus with a committee of faculty and professional staff assembled to determine the repairs needed to buildings essential to reopening the University in the fall. Despite a tight time schedule, the job was completed. More extensive repairs took several years longer.

the enormous sum of $6,000,000 had been allotted for the construction of the new library, gym, and Memorial Church, the buildings as constructed cost only $3,000,000 and suggested that the money had been "diverted" by the architect, contractor, and business manager of the University.[16] Replies by President Jordan and those accused appeared in the *Examiner* the next day. The buildings were constructed carefully according to specifications, they each pointed out; the damages suffered were due entirely to the severity of the quake. (Mrs. Stanford had died in 1905, sparing her the blow of the earthquake and these accusations.)

George Crothers, secretary of the Board of Trustees, saw that the reputation of the University as well as of individuals was involved and insisted on a stronger reply. In a letter to the editor, he attacked the alleged graft directly. "Your representative has shared the lot of many others in being led into making several inaccurate statements tending to reflect upon individuals and to discredit the institution." Crothers went on to refute unsubstantiated statements regarding the cost of the buildings, the quality of materials used by the contractor, and the adherence to specifications as drawn.[17]

Going one step farther, the incensed Board of Trustees declared in a formal resolution that the charges against Board member Charles Lathrop printed in the *Examiner* and copied in other papers were false and defamatory and they expressed their confidence in his honor and integrity.[18]

It was obvious, of course, that the single-story Inner Quad buildings constructed under Senator Stanford's direction withstood quite well the shock of the earthquake and that the buildings erected after his death in 1893 under the supervision of Mrs. Stanford and her brother, Charles Lathrop, suffered considerably, and a later report of outside consultants would make a point of this.

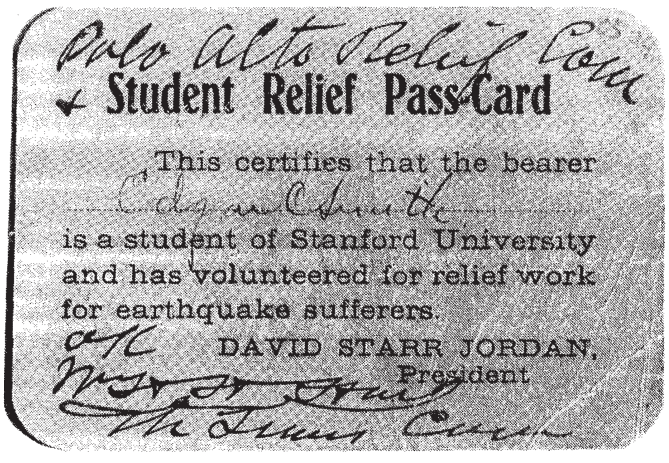
By their May 11, 1906 meeting the Trustees had in their hands the initial report of a committee of Stanford professors—Charles D. Marx, civil engineer and chairman; Charles B. Wing, structural engineer; William F. Durand, mechanical engineer; and Arthur B. Clark, architect—and the staff architect, Charles E. Hodges. The committee had been asked to survey the damages, particularly to those buildings needed in the immediate future for the students. After a brief summary of structural damages, the committee's report concluded that "the buildings mentioned above as are necessary for carrying on the university work can easily be made ready for occupancy and safe use in time for the opening of the University on August 23rd. . . . The actual damage to their stability is less than might be inferred from external appearances."[19]

Three consultants—Henry A. Schulz, architect; J. D. Galloway, civil engineer; and J. B. Leonard, civil engineer—were retained to study in more detail the condition of every building on campus, the work necessary to restore them to a safe condition in harmony with the original campus plan, and the cost of such restoration.

The consultants studied 42 buildings and the arcades and estimated that costs of repairs and restoration would be at least $1,781,384. In their lengthy report, they repeated the concern expressed earlier regarding the quality of design and construction. "It arrests attention that the inner quadrangle with but two exceptions should have escaped injury almost entirely and that the zone of greatest damage commences at the middle line of the first arch immediately adjacent to and connecting the inner quadrangle with its outer namesake and that it lies entirely without the inner quadrangle. Though it is a fact that the buildings of the inner quadrangle are but one story structures, the evidence is unmistakable that the mechanical workmanship of these structures is superior to that of the outer buildings. . . ."[20]

With the report of the consultants in hand, Professor Marx's committee began the process of finding workmen and carrying out repairs to the selected buildings needed for the opening in the fall. Construction began June 29, less than two months from registration, but, in spite of a local labor strike and the loss of two weeks, the job was completed in time. Since no books and little laboratory equipment had been lost, the academic function of the University took up where it had left off.

Still, the faculty trembled at the prospect of another "stone age." Would academic progress again be stymied while funds were diverted to restoring the ornamental architecture destroyed by the quake? Jordan was sympathetic. As he had admitted in a letter to fellow university president Andrew White of Cornell, "The Memorial Church splendidly built, but wrecked by the fall of its spire and flying buttresses, touches us deeply. . . . But the new library, gymnasium and Museum annex, crushed like a pie set on edge, we have no feeling for. They have kept us impoverished for long, tedious years."[21] Eventually plans for rebuilding the latter structures were permanently shelved.



Jordan had been offered, in a letter received the very day of the earthquake, the secretaryship of the Smithsonian Institution, a long held aspiration. He quickly concluded that his place was at Stanford. "I am sure that my place is here. I can now, I believe, weld this institution together. I need some years to complete this. Then the institution will be beautiful, with a great library, adequate apparatus, a strong and well-paid faculty and a small but selected and effective body of students . . . I shall stay with the poppies, the perfect sunshine and the shadow of the great Tremblor."[22]

The faculty committee had been somewhat overoptimistic about the time required for the more elaborate repairs, including some Outer Quad buildings. Periodic reports issued by the committee throughout 1907 and 1908 described the progress of each reconstruction project, often commenting upon onforeseen problems. The Committee's final report was submitted December 3, 1908, when all repairs as originally requested by the Board of Trustees were completed. Deferred plans for the Memorial Church renovation now went forward. The Church was dissassembled, and completely rebuilt—minus the steeple—to withstand future earthquakes. Reopened for services in 1913, the Church received the final touches, new mosaics for its facade, in 1916.

With its skyline cropped, its ornamental edifices gone, the effect of the earthquake on the physical plant of the campus was obvious. The effect on the hearts and minds of the Stanford community was perhaps not so obvious but nevertheless strong. Who could forget where they were Wednesday, April 18, 1906 and what they did on the days immediately following? How many could not help but wonder, "Would Stanford ever recover?" Stanford did recover. "It is not buildings that make a university, but professors and students," Jordan had said—and Stanford set out to prove it.

NOTES

1. Letter, Ernest N. Smith to Jessie, 10 May 1906 (Earthquake Collection, Stanford University Archives).
2. Letter, David Starr Jordan to Andrew White, 25 April 1906 (David Starr Jordan Papers, Stanford University Archives).
3. Edith R. Mirrielees, "The day after," *Stanford Alumnus*, vol. 7 (May 1906): 7.
4. *Daily Palo Alto*, 21 April 1906, p. 4.
5. Edgar C. Smith, *Genealogy and Personal Memoirs of Edgar C. Smith* (Privately printed), p. 28. (Earthquake Collection, Stanford University Archives).
6. Ibid.
7. Letter, Ernest N. Smith, 10 May 1906.
8. Jeannette Hayward Beymer, "When our University shook," 1907, p. 5 (manuscript later published in the *Stanford Review*, April 1931) (Earthquake Collection, Stanford University Archives).
9. Circular, David Starr Jordan, 19 April 1906 (Earthquake Collection, Stanford University Archives).
10. *Daily Palo Alto*, 20 April 1906.
11. Letter, Ernest N. Smith, 10 May 1906.
12. Edgar C. Smith, *Genealogy*, p. 30.
13. Ibid., p. 31.
14. *Stanford Alumnus*, vol. 7 (May 1906): 3.
15. Circular, David Starr Jordan and Samuel F. Leib, 12 July 1906 (Earthquake Collection, Stanford University Archives).
16. *San Francisco Examiner*, 1 May 1906.
17. George Crothers, Letter to the Editor, *San Francisco Examiner*, 2 May 1906, quoted in the *Stanford Alumnus*, vol. 7 (May 1906): 28.
18. *Stanford Alumnus*, vol. 7 (May 1906): 32.
19. "Report of the Stanford University Engineers on the injuries to the classrooms and laboratories from the earthquake of April 18, 1906." Trustees Documents, 11 May 1906, Stanford University Archives.
20. "Report on condition of buildings constituting Leland Stanford Junior University, California, and damages resulting thereto from the effects of the earthquake of April 18, 1906." Trustees Documents, 1 August 1906, Stanford University Archives.
21. Letter, David Starr Jordan to Andrew White, 25 April 1906 (David Starr Jordan Papers, Stanford University Archives).
22. Ibid.

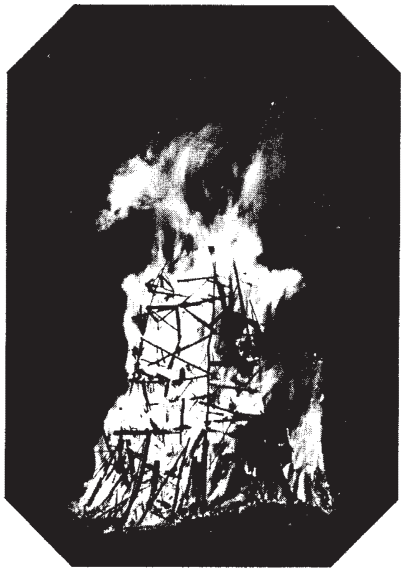
A group of Stanford students, photographed by Carl Breer, on relief duty in San Francisco about a week after the quake. "The building seen in back of us," Breer remembered, "was our headquarters where we slept, ate, and spent all our time as darkness came on." They carried passes such as the one at left issued to Edgar Smith, whose memoirs are the source of much information about quake experiences at Stanford.

A Thirties Album

The Depression was on in the outside world but, if anything, that only made campus life richer as students relied more on their own resources of entertainment. Drama, debate, publications, campus politics, athletics, and traditions were thriving.

(All photos from the Stanford University Archives.)

The 1933 Big Game was the first for the legendary Vow Boys. They won it, 7-3, and promptly accepted the first of three successive Rose Bowl bids.

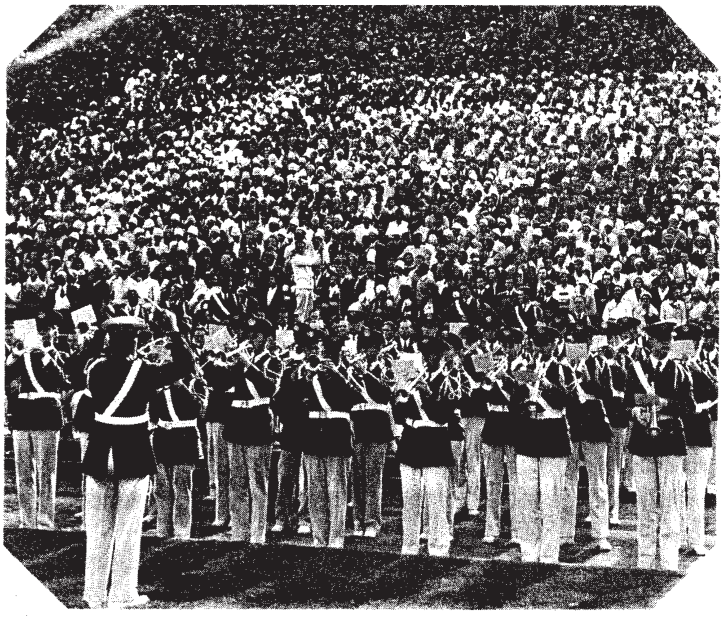


Big Game bonfires were BIG!

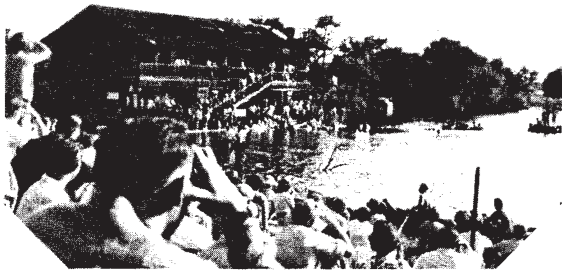
The frosh-soph mudfight, which replaced the tie-up in the late twenties, was abandoned in 1937. Some said this was part of the smoothing of the Stanford Rough with the coming of more women students.

The 500 limit on women students was lifted in May of 1933 and in October, 1934, the beautiful new dormitory for women, Lagunita Court, was opened.

The Pajamarino parade headed down Palm Drive to a free show at the Stanford Theater.



The belted and visor-hatted band entertained at the 1932 USC game in Stanford stadium. It was Pop Warner's last season and the Cardinals lost, 13-0.



The Junior Water Carnival on Lagunita. The old boathouse later collapsed under the weight of spectators.

The Royal Family *by Ferber and Kaufman was a hit of the 1930-31 season. Nelson Carter portrayed Tony Cavendish with Barrymore flourishes.*

Do you have a picture which could fill this space? The University Archives are short of photos of the thirties. Maybe people couldn't afford film, or perhaps they don't think that was long enough ago to be "history." In any event, if you have something to offer, please get in touch with the Archives, Green Library, Stanford,California 94305; phone 415-497-4055.

Senior class officers and Ray Lyman Wilbur presided as the Class of '39 embedded its memorabilia beneath a plate of bronze by Memorial Church.

Dr. Terman's Paper Trail

His records, occupying 120 feet of shelving, are now one of the most important collections in the Stanford Archives.

© Carolyn Caddes

by Frederic O. Glover

The papers of Frederick E. Terman—the meticulous record of the career of the University's Provost Emeritus as administrator, governmental adviser, author, and faculty talent hunter extraordinary—are now a part of the Stanford University Archives.

There, through a $10,000 grant from Dr. Terman which accompanied his gift of the documents, they are being arranged for future scholarly use.

Expected to be a gold mine for doctoral and other academic studies, the papers arrived at Archives in 100 transfer boxes and are now being processed, document by document, by Library Specialist Margaret Coesfeld. The papers include approximately 180,000 items and occupy 120 linear feet of shelf space.

The materials represent the paper trail left by the man whose theory of "steeples of excellence" left its mark first on Stanford University's School of Engineering and then on the entire University.

His realization of the importance of using finite resources to achieve excellence in selected fields rather than mediocrity in many fields was heightened by his World War II experience in directing the Harvard Radio Research Laboratory, set up to develop counter-measures against enemy radar. Dr. Terman was astounded at the accomplishments of the gifted young laboratory staff "when the chips were down on something important and they were the only ones who could do anything about it," he comments.

The laboratory's work was so successful that it was credited with saving 700 Allied bombers and the lives of thousands of airmen.

The records of those war years—formerly top secret, secret, and classified, but now all declassified—that are a part of the Terman papers include a complete set of the Laboratory's technical reports and certain other related sensitive documents. This material was Dr. Terman's office set of the laboratory's output, which he was allowed to keep.

Many of the laboratory staff came back to Stanford after the war, including Professors Felix Bloch (later to win the Nobel Prize), Joseph M. Pettit, Laurence A. Manning, William R. Rambo, Karl R. Spangenberg, and O. G. Villard, Jr. Several others became leaders in the electronics industry which grew up around Stanford under Dr. Terman's influence.

The processing of this large body of papers provides an insight into procedure designed both to preserve the papers and to organize them for convenient use by researchers with varying interests.

The first step was to make a preliminary inventory of each transfer box. In this process groups of unrelated materials were removed, such as five boxes of the papers of Dr. Terman's father, the famed psychologist Lewis M. Terman. These were added to the existing Lewis M. Terman collection in the University Archives. As part of this inventory preparation, staples and paper clips were eliminated. If left, they would rust; worse yet, they would add to the wear and tear of papers being examined by researchers. The papers were then placed in acid-free folders and manuscript boxes.

The Terman papers have been broken down into 11 subjects or "series," the largest of which cover Stanford administration, the Engineering School, the Harvard Radio Research Laboratory, and work in professional organizations and government consulting.

Within each of the boxes, which now line the wall nearly to the ceiling in the University Archives auxiliary work room on the fourth floor of the Green Library, the subject folders are filed alphabetically. Within each folder the items are filed chronologically. A complete folder list has been made for each box. Eventually a detailed name index will also be constructed. So everyone who has written a letter to Dr. Terman, or received one from him, just might find his name in the correspondence index. And there were a lot of these people.

During Dr. Terman's career at Stanford, beginning in 1925, he has been professor, researcher, department chairman, dean, provost, and provost

emeritus. "This range of experience and his highly developed sense of record-keeping have combined to produce an unusually valuable set of papers," comments Ralph W. Hansen, University Archivist. "They will be a primary source for anyone seeking information about Stanford or higher education in general."

The records pertaining to Stanford fill 78 manuscript boxes and they document the growth of a fine, regional institution into one of the top universities of the world.

The Provost Emeritus's ability to put facts on paper has awed generations of University officers and faculty. Seldom did he sit down with a dean or department chairman without having probably more facts written down about the school or department than did the person who headed it.

When Dr. Terman came to the monthly meetings of the Stanford Board of Trustees, as he did for years, he came armed with a heavy collection of large black binders. This small arsenal of factual ammunition, which jammed a very pregnant briefcase, often sparked humorous comments at these meetings, but it proved immensely useful when the Provost would flip to a well indexed page and produce a needed figure or statistic or an elusive fact—data now all part of the Terman archives.

The Harvard Radio Research Laboratory boxes contain not only technical papers but also samples of "chaff"—the narrow aluminum strips which were dropped out of airplanes in great quantities to confuse enemy radar, as were other forms of aluminum such as ribbon and wire.

Military historians will find this material useful, as they will Dr. Terman's papers on the maze of national defense organizations in which he participated: the Naval Research Advisory Board, on which Dr. Terman served eight years, including one as chairman, the latter post automatically making him a member for that year of the Defense Science Board; the Signal Corps Research and Development Committee; and a half dozen or more other relatively high level committees in the Department of Defense—civilians advising generals and admirals; and as an advisory member to several subcommittees of the President's Science Advisory Committee, whose establishment by President Eisenhower was sparked by the Russians' feat in putting Sputnik into orbit.

The files show that this committee work was often exciting. Dr. Terman, as part of his Naval Research Advisory Board activities, once landed on the deck of a carrier several hundred miles off San Diego. Another time he went to sea from Roanoke, Virginia, on a nuclear-power aircraft carrier which he was allowed to steer for an exciting few moments. The committee members were flown back to Washington from the deck of the carrier.

Ms. Coesfeld, the library specialist most intimately involved in organizing the Terman papers into research form, has been interested to see the consistency of Dr. Terman's approach.

"Throughout the papers," she commented, "I could see Dr. Terman's dedication to the pursuit of excellence, which one might compare to a Wagnerian leitmotif in his thinking."

She is amazed, too, at the Provost Emeritus's level of energy and the evidence that he put every available minute to productive use. This was brought home by one memorandum, written on an airplane trip East to another Stanford officer, reporting the results of the Provost's statistical analysis of the doctoral degrees granted at a Stanford commencement. He had made the study by analyzing the printed graduation program while he was seated on the stage during a long address and ceremony.

"Dr. Terman has an intense focus; he is 'indistractable,' " Ms. Coesfeld pointed out.

The Terman papers contain a large amount of computerized information

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Frederic O. Glover, a director of the Historical Society, is now retired after many years of service at Stanford as Director of Information, Executive Assistant to the President, and Secretary to the University.

Last December Frederick E. Terman became the tenth person to receive the "Degree of Uncommon Man" from the Stanford Associates. The award honors "unique and outstanding service" to the University. It is based on Herbert Hoover's statement that "we believe in equal opportunity for all, but we know this includes the opportunity to rise to leadership, in other words to be uncommon." Following are excerpts from Dr. Terman's acceptance speech.

For 66 years I have been a legal resident of the Stanford campus, and thus have had close contact with virtually the entire history of Stanford University . . . . I had an understanding father, who, while not particularly interested in the administrative side of education, nevertheless was an excellent judge of academic values. As a consequence, even before entering Stanford as a freshman, I knew more about the University's strengths and weaknesses than most of the young faculty members.

Stanford started under very favorable circumstances. It had the Stanford money, the backing of the Stanford name, and most important of all from an academic viewpoint, it had the leadership of David Starr Jordan. Dr. Jordan made the public aware of the new institution, and he had the combination of personal prestige and sales ability to gather together a respectable initial faculty and student body.

If Stanford had followed the original pattern it would undoubtedly today be the nicest smallish college in the country offering a program of liberal arts ornamented with trimmings of science and technology. However, this was not to be, for when Dr. Ray Lyman Wilbur became president in 1916, he reoriented Stanford by increasing the emphasis on faculty scholarship, upon research, and upon the training of graduate students, while still retaining as much as possible of the student spirit and camaraderie that long had been characteristic of Stanford.

The foundation built during the years before World War II has not only lasted, but has been greatly strengthened in the last twenty-five years of leadership under Wallace Sterling and Richard Lyman. First and perhaps most important was the fact that the Medical School was moved lock, stock and barrel from San Francisco to the Stanford campus. This was a tremendous undertaking, both in terms of a new physical plant to be constructed and in terms of personal relations. Time has shown that, difficult as it was, this move was worth the effort and has greatly strengthened both the Medical School and the related sciences.

As Stanford grew in quality and stature there was a corresponding increase in the number and quality of students desiring to study at Stanford, and undergraduate students came to be drawn from wider and wider sources . . . . Concurrently, special attention began to be given to the recruitment of graduate students to serve as teaching and/or research assistants.

on a variety of Stanford operations, and Dr. Terman tells the origin of this material in a memorandum:

"Around 1955 the Registrar's office computerized its record keeping operations. I saw at once the opportunity to obtain at nominal expense a vast amount of statistical data on the educational activities within Stanford in which the Provost had a particular interest, but which had been to this time unavailable.

"I got a modest grant from the Ford Foundation and enlisted Professor [Robert] Oakford to organize the plan. The result was a great variety of information in useful form . . .

"These volumes of data were highly personalized—that is they provided information I was personally interested in. The wealth of data at my fingertips enabled me to know what was going on in the University better than was generally suspected, and in particular enabled me to know where there were weak spots, and likewise where instruction was well organized.

"At the same time I carefully avoided letting the faculty get the feeling that the University was being run by an engineer [Terman] who in turn was controlled by an IBM machine."

The studies include a report on courses taught by individual instructors each term and the number of students in each course; course enrollment by quarter and by academic year; a study of the year each faculty member was due to retire; a report of restricted funds available to a department; enrollment in summer courses; student distribution by grade level; graduate student distribution on a course-by-course basis; graduate student aid; and salary statistics.

The Terman papers contain his Stanford studies on issues which are still being considered by other universities and indeed on a national level. One such study concerned the age of retirement.

Dr. Terman was concerned at the rigid policy that required faculty retirement at 65. "I always felt that this policy was a mistake in that Stanford lost the benefit of some of its great teachers before they had faded," Dr. Terman noted.

When he became Provost, armed with staff studies which he initiated and directed, he worked with the faculty Advisory Board to produce a policy in March, 1959 that permitted faculty members to be used for teaching service after formal retirement at age 65 if they were good teachers and if their services were needed for teaching purposes by the University.

"The best example," Dr. Terman wrote, "was [George] Polya, who at his prime was the senior mathematician on the West Coast, and who was an absolutely superb teacher at intermediate level, at advanced level, and even for teachers of high school math. The fact is we kept Polya teaching until he was over 80 and he earned every dime he received."

This use of emeritus faculty at Stanford is now extensive, Dr. Terman pointed out, and is handled in such a way that there are no adverse effects on the faculty program.

The papers contain the documentation of other studies carried out by Dr. Terman for President J. E. Wallace Sterling.

One, carried out in 1965 immediately after Dr. Terman's own retirement, showed that recent retirees would fare reasonably well financially, but that those who had retired before World War II or shortly thereafter had inadequate allowances.

"The financial situation of those who had retired on the older basis was checked one by one on a confidential basis, and the Trustees agreed to provide $40,000 towards the stipends necessary to enable them to live with dignity," Dr. Terman concluded in a note accompanying the files on this study.

Provost Terman had long been keeping careful track of the size of the faculty, by rank, salary, and by school and department. Some time after his retirement he prepared a study, now in the Archives, on "A Program for Faculty Planning," but it went dormant because the administration's time was preempted by problems of student activism. What he had found in his study was that, though the administration thought it was holding the line on

faculty numbers—and it was to some extent—in fact the faculty was expanding very modestly but steadily.

Dr. Terman's papers contain valuable information on the history of the Department of Electrical Engineering, which he headed in 1937-45 before becoming Dean of the School of Engineering—a department to which he retains close professional and sentimental ties and on which there are voluminous data in his papers.

One report concerns Frederic A. C. Perrine, Stanford's first electrical engineer, who headed the department from 1893 to 1900—a one-man department with a student assistant when he started, and growing in the seven years of his incumbency to a staff of one assistant professor, an instructor, and two student assistants. This is a contrast to the current size of the department, which has 35 professors, nine associate professors, nine assistant professors, nine adjunct professors (involved largely in research), and seven part-time lecturers.

The professional organization series covers Dr. Terman's participation in the Institute of Radio Engineers (IRE), of which he was president in 1941. This organization merged in 1963 with the American Institute of Electrical Engineers (AIEE) to form the Institute of Electrical and Electronic Engineers (IEEE). After Dr. Terman's retirement in 1965, he became very active in the IEEE, as bulky files reflect.

The IRE honored him with a Medal of Honor in 1950 and with its Founder's Award in 1950. He was the first recipient of the AIEE Education Medal, established in 1956, a rather special honor since the selection committee had all the electrical engineering professors in the country available from whom to select the first holder of the medal.

These meticulously maintained files will provide a good basis for a study of the growth, activities, and effectiveness of these professional organizations of electrical and electronic engineers over nearly three decades.

The Archives staff estimates that it will be December, 1979, before the collection can be opened to research workers. This will be a date when a great deal of Stanford history, in intimate detail, will be opened to scholars.

The papers will show one thing above all: how Dr. Terman, throughout his life, recognized excellence and was a shrewd judge of talent.

He applied this insight to himself, recognizing early in his life that his own strength lay in textbook writing and in his ability to write clearly and lucidly, and recognizing also that as a scientist he lacked the spark of genius which he saw in colleagues like Professor William W. Hansen, coinventor of the Klystron tube.

This latter conviction led him first into University administration, then into World War II work in which he used his administrative talents to direct a laboratory which at its peak had a staff of 880 men.

His war-time experiences led to his recognition of the need for a strong bond between industry and university research—a "marriage" for which he was the academic pastor and which led to the family of industries located in Stanford Industrial Park, many of them with mutually beneficial ties to the University—ties which the Terman papers will certainly reflect.

The papers document, too, the Terman commitment to faculty excellence, which he likes to compare to a strategy for high-jumpers on a track team. As he puts it, "It is better to have one seven-foot jumper than any number of six-foot jumpers." This is the principle he calls "steeples of excellence."

Dr. Terman, working with President Sterling, had a lot to do with the "steeples of excellence" in the Stanford faculty, and the meticulous blueprints which made them possible will be available for scholarly eyes in the Frederick E. Terman papers in the Stanford University Archives.

Stanford skillfully utilized government support to strengthen the University academically. Only projects that had academic value were accepted, and most of the work was carried on directly by the faculty sponsor and his associated students. We very carefully avoided using full-time research associates to carry on research that students could handle and which could therefore be used to train students. Thus during my period as Provost there were two government projects offered Stanford, each of approximately $1 million per year, that were turned down by us, one because it represented essentially a job shop operation rather than research, and the other because it was so secret that only faculty could participate.

At the end of World War II Stanford greatly increased the vigor with which searches were made for new faculty members. This included increasing the scope of searches to a national basis, plus getting the maximum possible information on each candidate, and being willing to pay something extra for extra quality .

The high esteem in which Stanford is held by the public, and the loyalty of Stanford graduates to the institution, is indicated by the successful completion of the recent five-year, $300 million campaign . . . . I also call your attention to the fact that the August 17 edition of the New York Sunday Times contains an article that discusses the performance of university endowment funds, and states that since 1973 Stanford's endowment fund has outperformed the endowment fund of every major university in the country, not even excepting Harvard.

Stanford Historical Society Newsletter

Jordan will "speak" in oral history report at annual meeting May 29

The voice of David Starr Jordan delivering a talk entitled "The Stanford Spirit" will be heard at the annual meeting of the Historical Society in May.

This rare recording, made in 1916, and others of historical importance will be played by Frederic O. Glover, head of the Society's oral history program, who will deliver the principal address at the annual meeting.

A single copy of the Jordan disc was discovered almost by accident 40 years ago by W. R. Moran, now honorary curator of the Stanford Archive of Recorded Sound, a part of the University Libraries.

It illustrates dramatically the need for the systematic program of recorded history which Glover has begun for the Society. He has already taped the reminiscences of several prominent Stanford figures and additional ones are planned.

The annual meeting will be held at 3:30 p.m. Tuesday, May 29 (not May 28 as stated in the previous *Newsletter*) in the auditorium of the new Terman Engineering Center.

President Harvey Hall will report on the highlights of the Society's year and directors for 1979-80 will be elected. The by-laws provide that the directors shall elect officers from their membership.

Panorama book project financed and under way

The Historical Society's three-year-old plan to portray the campus in a finely produced book of photographs, drawings, and text has been financed and is into production.

"Stanford Panorama" (a working title), is planned as a book of some 200 oversize pages and will emphasize four-color photography. The publication target date is autumn of 1980.

The University has agreed to finance the project with an as-needed, interest bearing loan which will have first claim on proceeds from sales. The loan was negotiated by Harvey Hall, the Society president; Kenneth C. Christensen, a Society director and chairman of the Panorama advisory committee; and Donald T. Carlson, director of University relations.

The Stanford Alumni Association has joined the Society as copublisher and both organizations will share in any returns after repayment of the loan and an allowance for expenses.

Peter C. Allen, University editor emeritus, is serving as general editor and is writing the text. Alumni Association staff members participating are Della van Heyst, deputy director; Debby Fife, managing editor of *The Stanford Magazine;* Kay Daley, managing editor of the *Alumni Almanac;* and Peter Mansfield, associate director and controller.

James Stockton, San Francisco freelance book designer, has been engaged. A Stanford alumnus, he has directed the Association's Conference on Design the past two summers.

Leo Holub, senior lecturer for photography in the Stanford Art Department, is chief photographer. Well-known for his pictures of the campus and elsewhere, he has been at work since November on new material for Panorama. In addition, Susan Riggs, a specialist on the University Libraries staff, is researching existing photo collections.

Anyone wishing to submit pictures—either color or black-and-white—for consideration is urged to get in touch with Debby Fife, Bowman Alumni House, Stanford, CA 94305.

Lecture by Mrs. King on the Museum is a hit with Society members

Mrs. Leland King enthralled 75 members of the Historical Society at a special meeting in November with her illustrated lecture on the Stanford Museum.

The meeting, arranged by Mrs. Robert van Vleck Anderson, the Society's special events chairman, was held in a Museum gallery and was followed by a reception in the lofty marble rotunda.

Mrs. King, a Committee for Art docent for the Museum and Art Gallery, had researched her subject thoroughly and this showed through in the richness of interesting and little-known information which she imparted.

She emphasized Mrs. Leland Stanford's principal role in creating the Museum as a special memorial to her son. Mrs. Stanford chose as an architectural model the National Archaeological Museum at Athens, which young Leland had admired in 1884.

Projecting drawings and photographs, Mrs. King traced the planning and construction period, including the installation of the mosaics; the installation of the collections; the damage of the 1906 earthquake; and the long recovery to the present.

Her talk was recorded by the Society and a copy has been placed in the University Archives.

A 50-year book fine inspires forgiveness

History of a sort was made recently when a Stanford professor returned a book to the Harvard library that was 50 years overdue. And Harvard forgave the fine!

Julien A. Ripley, Stanford professor emeritus of Physical Science, who died four years ago, checked out a copy of *The Theory of Transfinite Numbers* by Georg Cantor in 1928.

A close friend, Professor George A. Feigen, Stanford physiologist, discovered the book while visiting the Ripley family farm in Pennsylvania. He returned it to Harvard on October 29, exactly 50 years after the due date, adding in a note, "For the repose of his soul, I hope that this sets some kind of a record."

It was indeed a record, replied Shiela K. Hart of the Harvard library. Of the fine she said, "subtracting Sundays and adding leap years, the grand total comes to $1,263.75, which we have decided to waive in consideration of your superb timing of its return on the 50th anniversary of the due date."

Founders' Day ceremony

For the fourth successive year the Historical Society and the Alumni Association will join in the revival of Founders' Day ceremonies on March 9--a record that would seem to justify again calling this event "a tradition."

The ceremony will be held Friday, March 9, the anniversary of Senator Stanford's birth, at the Stanford Mausoleum in the Arboretum. A speaker and student participation are being arranged by H. Donald Winbigler, the Society's program chairman, and flowers will be placed before the bronze door of the crypt.

It's fireworks instead of fire at Big Game rally at Lake Lag

Big Game hijinks took a new turn this year when a huge fireworks extravaganza on the dry bed of Lake Lagunita took the place of the bonfire. Environmental and safety reasons brought an end to the bonfire last year.

The fireworks capped the customary Thursday night all-campus rally and other traditional Big Game Week events such as the "Bearial" of Oski, an original *Big Game Gaieties* by Ram's Head, and a student caravan following the band to San Francisco Friday night for appearances downtown and at alumni reunions.

It all must have helped because the Cardinals ruled over the Blue and Gold for the third straight year--30 to 10, this time. Stanford leads the series 39-32-10.

Stanford library fund honors Delmer Daves

Members of the Stanford Class of '26 and the Associates of the Stanford University Libraries have raised $12,000 for an endowed fund honoring the late Delmer Daves, president of '26 and a longtime Stanford benefactor. Income from the fund, which was inspired by Clark Cypher, '26, a member of the Historical Society, will be used to purchase books, films, and manuscripts for the Stanford Libraries. Daves was a noted motion picture director and prior to his death he gave much of his film library to the University.

Hanna home is listed on National Register

The home on the Stanford campus which Frank Lloyd Wright designed for Professor and Mrs. Paul R. Hanna has been entered on the National Register of Historic Places, it has been announced by Chris Therral Delaporte, director of the Heritage Conservation and Recreation Service of the Department of the Interior.

Established by the Secretary of the Interior under provisions of the National Historic Preservation Act of 1966, the National Register is the official list of the nation's cultural properties worthy of preservation.

The residence, built in 1935, was designated by the American Institute of Architects as one of 17 buildings among more than 400 designed by Wright "to be retained as an example of his architectural contribution to American culture."

Now known as Hanna-Honeycomb House, reflecting the hexagonal or honeycomb design of the house and terraces, the home was given to the University by the Hannas with the intention that it be used eventually as the residence of distinguished visiting professors. (See *Stanford Historical Society Newsletter,* Autumn 1977.)

Return of family bronze to Memorial Court urged

The directors of the Society have recommended to University authorities that the bronze statue of the Stanford family group be restored to Memorial Court, the location it occupied for many years.

Last March, after a vandal sawed off the right thumb of Leland Jr.'s outstretched hand, the Society provided

The Historical Society underwrote the cost of moving these two cast iron statues of griffins from a weed patch near San Francisquito Creek to the lawn at the front entrance of Encina Gymnasium. The 1,500-pound statues had flanked the entrance to the Stanford's home which was nearest El Camino Real. The Society acted to rescue a bit of Stanford history, not to take sides in the move among some students for adoption of the griffin as a mascot.

$200 for removal of the statue to a campus warehouse. At the time it was being displayed under the arcade of the Art Gallery and before that it had been in the Museum.

The directors' recommendation resulted from a committee study chaired by Patrick J. Maveety. The committee suggested that the statue be placed on a smooth, six-foot pedestal surrounded by a pool of water to discourage vandals. The more open location was also considered a safeguard.

The original position was in the geometric center of the courtyard. The committee also suggested that placement in the center of the west side of the court would be an appropriate alternative if there are objections that placement in the center would interrupt the axial view from the front of the Quad to Memorial Church.

Death takes Kosta Boris, Hoover House majordomo

Kosta Boris, the courtly and kindly majordomo in the households of two Stanford presidents, died October 1 at his Palo Alto home at age 89.

Mr. Boris was for many years an aide to Herbert Hoover, beginning at the food relief headquarters in Paris right after World War I and continuing through Mr. Hoover's service in Washington as Secretary of Commerce and President.

He returned with the Hoovers to their family home on the campus in 1932. When the Hoovers moved to New York in 1934 Mr. Boris remained at the Stanford home.

After his wife's death in 1944, Mr. Hoover gave the home to the University to be the home of Stanford's president. Mr. Boris served the families of Dr. and Mrs. Donald B. Tresidder and Dr. and Mrs. Wallace Sterling.

Restorations cited

The History Corner and Old Pavilion renovations have been honored for good design, Philip C. Williams, Stanford's Director of Planning, has reported. *Urban Design* magazine cited History Corner among 50 other projects nationwide in its "Renovation and Preservation" category. The reconstruction of the interior of the former basketball pavilion has received an Award of Merit from the East Bay, Northern California, and Santa Clara Valley chapters of the American Institute of Architects.

Remembering Roxana Ferris—friend and scientist

Millicent Dillon of the Stanford News Service was a friend of Roxana Ferris, retired curator of the Dudley Herbarium, who died June 30, 1978. Recently she gathered three others who were also good friends for a joint interview. The following excerpts are from her story as published by Campus Report, *the faculty/staff weekly newspaper. Those interviewed were Elinor Cogswell, former editor of the* Palo Alto Times; *Kay Pinkham Harris, widow of Stanford history professor David Harris and a former newspaperwoman; and John Thomas, professor in Biological Sciences.*

Elinor met Roxy in 1913, when they both came to Stanford as freshmen. . . .

"Roxy came to Stanford expecting to be a German major, but she took one course in botany and she was hooked. There was never any question of what she wanted to do after that."

At Stanford Roxy met Gordon Ferris, a bright young entomologist, and in 1916, after she graduated from Stanford, they were married. . . .

"When she and 'Ferry' were married, they didn't have a dime. They lived in that little house on Melville, where they lived for the rest of their lives. They had a busy social life, but not what you'd call a university social life. They would take in any 'ragtag or bobtail' that came to the door. . . ."

Gordon went on to become a world-famous entomologist. He was a professor of biology at Stanford until his death in 1958. Roxy took her M.A. in botany and worked at the Dudley Herbarium. Their daughter, Beth, was born in 1917. Roxy kept working while her mother cared for the child.

"The marriage wasn't a usual one for those days," Kay says. "They were both very independent. They had their own interests and led their own lives. Ferry was interested in two things, in his work and in being home. I remember him walking around for weeks with a cage attached to his arm. He was the world expert on the body louse and was observing their activity on his arm."

To Roxy many other things mattered beside her work. In 1975 she said to me, "To some of the others their work was a religion. It wasn't that for me. I wasn't a compulsive collector. It was for my pleasure. If I wasn't pleased by it, why should I do it? . . ."

Of her work at the Herbarium, Roxy would say to friends, "I'm the hired help there."

"She was earning practically nothing and she had no status, but it didn't seem to matter. It was work she loved."

But then when Gordon Ferris died in 1958 something in Roxy changed, according to Elinor.

"She said to me thoughtfully that she would have to change, she did not feel bitter about what her position at the Herbarium had been. She just very gently perceived what had happened to her, that she had in fact been the hired help at the Herbarium, though she had made important contributions to the work.

"After that she felt differently about herself. I noticed it in the pleasure she took in awards that were given to her."

By the '60s Roxy's work was being recognized at Stanford and elsewhere. In the course of her career, Roxy collected 14,000 individual Herbarium collections, all the way from China to Texas and in

Roxana Ferris on a collecting trip.

such out-of-the-way places as the Tres Marias Islands of Mexico. Her name is commemorated in a number of species. . . .

John Thomas, professor of biology and curator of Stanford's Dudley Herbarium (now combined with the collection of the California Academy of Sciences in San Francisco), came to Stanford as a graduate student in 1948 and met Roxy then.

He, too, remembers what independent lives the Ferrises had, though they worked in the same building. "Ferry's office was on the first floor and Roxy on the second and almost never would he come upstairs.

"When I came she'd been working in the department for over 30 years, starting out as an assistant when she was an undergraduate. By then she had the title of assistant curator.

"But actually from the mid-'20s on, Roxy did most of her work in the Herbarium. She handled and delegated most of the routine work having to do with identification and exchanges with other institutions. And she was always exceedingly helpful to students.

"She had another role at the Herbarium that no one fills now. Every once in a while she'd say, 'I think it's time to have lunch at my house. Come at 12.' It was spontaneous and delightful. Actually it was Roxy who largely determined the spirit in the Herbarium, who made it the kind of place it was."

She was Dr. Leroy Abram's assistant on the writing of three massive volumes, *The Illustrated Flora of the Pacific States.*

"In retrospect," says John, "it would not be inappropriate to have said that they were written by Dr. Abrams and Roxy. The fourth volume of this work she herself did complete and is listed as the author. . . ."

In the early '60s, after her husband's death, Roxy was invited to go East to the New York Botanical Gardens on a grant from the Rockefellers, to set up a series of books to be written on the wildflowers of the U.S.

"It was Roxy who did the initial listing of plants and divided the country into regions. She didn't do the writing, but she outlined how the series was to proceed," John recalls. . . .

One could say that Roxy Ferris was like one of those native plants she described with such close attention, exuberant as they are in their season, independent of the care of others. She found the climate and the place to root herself. She made of her world what she could. She will be missed by those who knew her.

Emeriti Obituaries

Paul R. Farnsworth

Paul R. Farnsworth, professor emeritus of Psychology, died October 27 at his campus home after a long illness. He was 79.

Professor Farnsworth, who received the B.A., M.A., and Ph.D. degrees at Ohio State University, joined the Stanford faculty in 1925 and retired in 1964.

He was a specialist in the psychology of music and was several times president of the Division of Arts of the American Psychological Association. He edited the *Annual Review of Psychology.*

Dr. Farnsworth had been a member of two high-ranking faculty committees, the Advisory Board and the Executive Committee.

His wife, Helen C. Farnsworth, professor emeritus of Food Research and Economics, died in 1974.

Ernest P. (Husky) Hunt

Ernest P. (Husky) Hunt, Associate Professor Emeritus of Athletics, Physical Education, and Recreation and a much-liked and respected figure in Stanford sports for more than half a century, died November 20 after a long illness. He was 90.

This is what Don Liebendorfer said about Husky Hunt in his book of athletic history, *The Color of Life Is Red:*

"Andy Kerr resigned as Stanford's head basketball coach at the end of the 1926 season to become head football coach at Washington and Jefferson College and was succeeded by E. P. (Husky) Hunt. This soft-spoken, pint-sized man served the Athletic Department in more different capacities over a period of nearly 35 years than any other man, with the exception of Harry Maloney. Between 1922, when he first came to the Farm, and 1955, when he retired, Hunt at one time or another was head basketball coach, freshman basketball coach, freshman baseball coach, freshman football coach, assistant varsity football coach, head wrestling coach, and head gymnastics coach. For some years he took all of Stanford's official football game movies and filmed other sports, too."

He continued his interest in Cardinal teams after his retirement and also made frequent trips to Indian reservations in the western states, making documentary films on the life of native Americans. He interested the government in stimulating the sale of Indian products and himself became an authority on the work of the Navajos.

Carlton A. Pederson

Carlton A. Pederson, professor emeritus in the Graduate School of Business, died October 13 at his campus home. He was 67 years old.

Dr. Pederson was a faculty member for 30 years before his retirement in 1976. He was nationally known as the coauthor of books on management and salesmanship.

He received his Ph.D. in business administration at Stanford in 1946 and joined the faculty at that time. Previously he had taught at San Jose State and served as director of education and training for Lockheed Aircraft in Burbank.

Dr. Pederson taught in the Stanford-Sloan program for midcareer executives, which he helped to develop as acting dean of the business school. He also taught in the Stanford program for senior executives and in Stanford-affiliated business programs in France and Australia.

In 1963 Professor Pederson received the Mead Johnson Foundation professorship award, a 10-year fellowship which enabled him to devote more time to research on general management.

Ann Purdy

Ann Purdy, M.D., clinical professor emeritus of pediatrics, died December 10 following a stroke. She was 90.

Dr. Purdy was widely recognized for her pioneer work in the early diagnosis of rheumatic fever. A native of Quebec, she worked her way through McGill University, winning a Gold Medalist Award, and later graduated fifth in her class at Johns Hopkins School of Medicine.

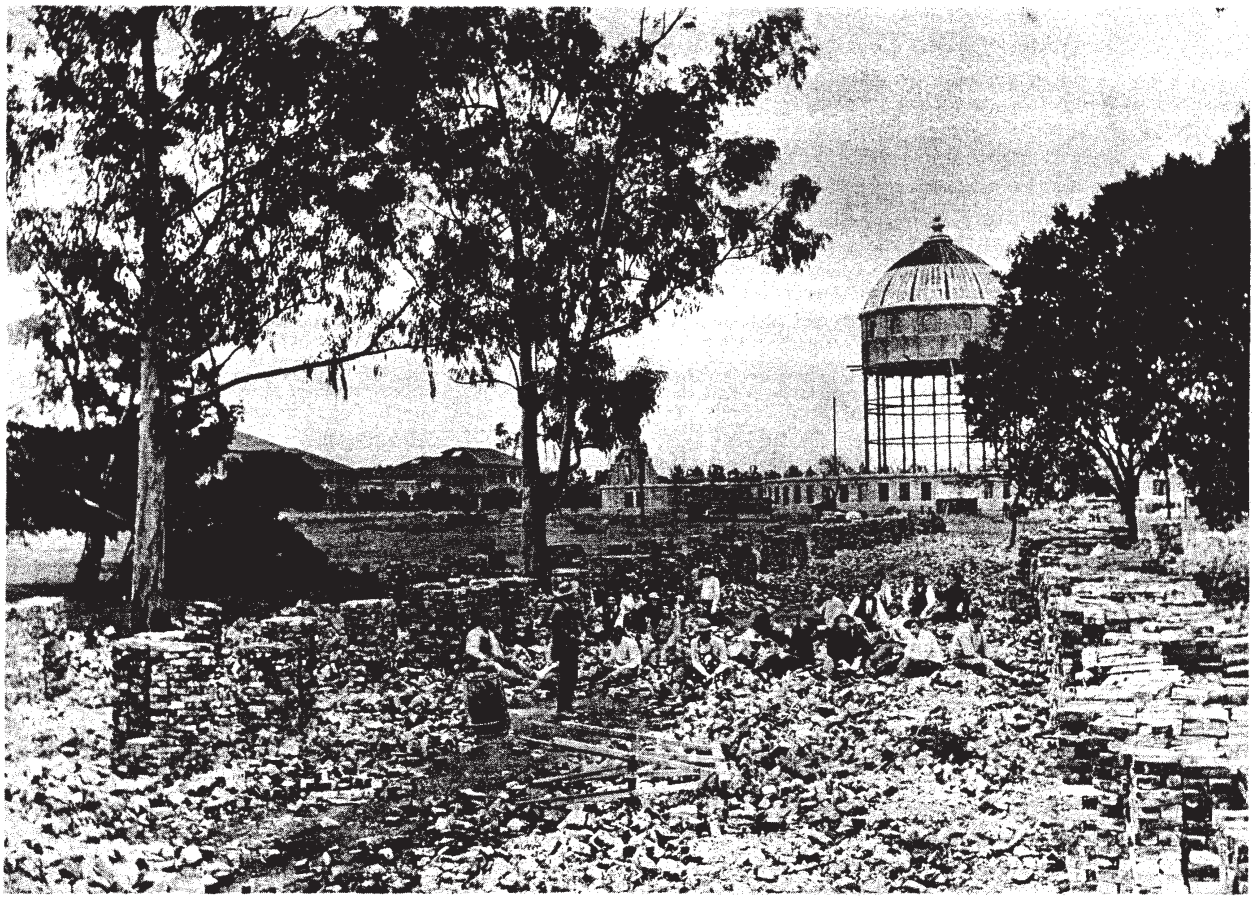
She was the widow of Dr. Emile Holman, noted Stanford cardiovascular surgeon, who died last year.

James B. (Bert) Wells

James B. (Bert) Wells, professor emeritus of Civil Engineering, died of cancer November 27 at the age of 90.

Professor Wells had lived in Palo Alto since he was four. He received the bachelor's degree in civil engineering from Stanford in 1911 and was employed by the Standard Oil Company of California until he joined the University's engineering faculty in 1928.

Professor Wells retired from teaching in 1954 and thereafter did private consulting, including earthquake safety studies of several University buildings. He served on the Palo Alto City Council in 1950-51.



Quite a few students got summer jobs cleaning the bricks that fell in the 1906 earthquake. These are the remains of the library and gymnasium which had been erected alongside the Oval and were destroyed just before they were ready for occupancy.

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